

We claim:

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1. A flexible composite comprising:
    - a reinforcement material having two faces;
    - a coating disposed over at least one face; and
    - a multiplicity of ribs raised above at least one of the coated faces. *112 ribs from ribs*
  2. A flexible composite according to claim 1, wherein the reinforcement material is comprised of fiberglass, nylon, polyester, aramid, polyethylene, polyolefins, polyimides, or films thereof.
  3. A flexible composite according to claim 1, wherein the coating is comprised of silicone rubbers, urethane rubbers, or fluoropolymer, including fluoroplastics (such as PTFE) and fluoroelastomers, or blends thereof. *112*
  4. A flexible composite according to claim 3, wherein the ribs are comprised of silicone rubbers, urethane rubbers, or fluoropolymer, including fluoroplastics (such as PTFE) and fluoroelastomers, or blends thereof. *112*
  5. A flexible composite according to claim 4, wherein the coating and the ribs are comprised of different materials.
  6. A flexible composite according to claim 4, wherein the coating and the ribs are comprised of a liquid silicone rubber formulation.
  7. A flexible composite according to claim 4, wherein the coating and the ribs are comprised of a polytetrafluoroethylene.
  8. A flexible composite according to claim 4, wherein the ribs are comprised of low density polytetrafluoroethylene.

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cont.

9. A flexible composite according to claim 2, wherein the reinforcement material is comprised of fiberglass and the coating and ribs are comprised of silicone rubber.
10. A flexible composite according to claim 1, wherein the ribs are arranged in a regular, repeating, natural, random, or cyclical pattern or combinations thereof.
11. A flexible composite according to claim 1, wherein the ribs form a pattern of a series of straight, parallel, essentially parallel, undulating, zigzag, or sinusoidal ribs or combinations thereof.
12. A conveyor belt for moving food items through a heating zone in a contact toaster, the belt comprising:
  - a reinforcement material having two faces;
  - a coating disposed over at least one face; and
  - a multiplicity of ribs raised above at least one of the coated faces.
13. A conveyor belt according to claim 12, wherein the reinforcement material is comprised of fiberglass, nylon, polyester, aramid, polyethylene, polyolefins, polyimides, or films thereof.
14. A conveyor belt according to claim 12, wherein the coating is comprised of silicone rubbers, urethane rubbers, or fluoropolymer, including fluoroplastics (such as PTFE) and fluoroelastomers, or blends thereof.
15. A conveyor belt according to claim 14, wherein the ribs are comprised of silicone rubbers, urethane rubbers, or fluoropolymer, including fluoroplastics (such as PTFE) and fluoroelastomers, or blends thereof.
16. A conveyor belt according to claim 15, wherein the coating and the ribs are comprised of different materials.

17. A conveyor belt according to claim 15, wherein the coating and the ribs are comprised of a liquid silicone rubber formulation.
18. A conveyor belt according to claim 15, wherein the coating and the ribs are comprised of a polytetrafluoroethylene.
19. A conveyor belt according to claim 15, wherein the ribs are comprised of low density polytetrafluoroethylene.
20. A conveyor belt according to claim 13, wherein the reinforcement material is comprised of fiberglass and the coating and ribs are comprised of silicone rubber.
21. A conveyor belt according to claim 12, wherein the ribs are arranged in a regular, repeating, natural, random, or cyclical pattern or combinations thereof.
22. A conveyor belt according to claim 12, wherein the ribs form a pattern of a series of straight, parallel, essentially parallel, undulating, zigzag, or sinusoidal ribs or combinations thereof.
23. A conveyor belt according to claim 12, wherein the longitudinal direction of the ribs is perpendicular to the longitudinal direction of the conveyor belt.
24. A conveyor belt according to claim 12, wherein the conveyor belt comprises two coated faces, each face including ribs raised above the surface of the face, wherein the ribs of one face are straight and parallel to each other and the longitudinal direction of the ribs is perpendicular to the longitudinal direction of the conveyor belt, and the ribs of the second face are arranged in a repeating, sinusoidal pattern.
25. A method for making a flexible composite comprising:
- (a) saturating and coating a woven fiberglass reinforcement material having two faces, with liquid silicone rubber to form a web;

(b) removing and forming the excess liquid silicone rubber by means of grooved wipers which are positioned to produce multiple ribs in a regular, repeating, natural, random or cyclical pattern, as the web moves past the wipers; and

(c) passing the web through an oven to cure or vulcanize the liquid silicone rubber.

26. A method for making a flexible composite according to claim 25, wherein the ribs form a pattern of a series of straight, parallel, essentially parallel, undulating, zigzag, or sinusoidal ribs or combinations thereof.

27. A method for making a flexible composite comprising:

(a) coating a reinforcement material having two faces, with unfused fluoropolymer by dipping the reinforcement material in an aqueous dispersion or latex, containing the fluoropolymer to form a web;

(b) supplying multiple streams of beadings to at least one face of the web to form multiple ribs in a regular, repeating, natural, random or cyclical pattern, wherein the beadings are comprised of unfused polytetrafluoroethylene or silica;

- (c) applying pressure to the beadings against the reinforcement material;
- (d) removing the pressure; and
- (e) heating the web to sinter and bond or adhere the beadings to the coated reinforcement material.

28. A method for making a flexible composite according to claim 27, wherein the ribs form a pattern of a series of straight, parallel, essentially parallel, undulating, zigzag, or sinusoidal ribs or combinations thereof.